

REMARKS

INTRODUCTION:

In accordance with the foregoing, claims 1, 4 and 5 have been amended, and claims 6 and 7 have been added. No new matter is being presented, and approval and entry are respectfully requested.

Claims 1-7 are pending and under consideration.

CHANGES TO THE SPECIFICATION AND ABSTRACT:

The Specification and Abstract have been reviewed in response to this Office Action. Changes have been made to the Specification and Abstract only to place them in preferred and better U.S. form for issuance and to resolve the Examiner's objections raised in the Office Action. No new matter has been added.

REJECTION UNDER 35 U.S.C. §112:

In the Office Action, at page 3, item 6, the Examiner rejected claims 4 and 5 under 35 U.S.C. §112, second paragraph, for the reasons set forth therein. The reasons for the rejection are set forth in the Office Action and therefore not repeated.

Applicants respectfully submit that the amendments of claims 4 and 5 overcome the Examiner's rejection.

REJECTION UNDER 35 U.S.C. §102:

In the Office Action, at page 3, item 9, the Examiner rejected claims 1 and 5 under 35 U.S.C. §102(e) as being anticipated by Ishiwada, (US 2003/0103703 – hereinafter Ishiwada). The reasons for the rejection are set forth in the Office Action and therefore not repeated. Applicants traverse this rejection and respectfully request reconsideration.

Amended, independent claim 1 recites: "...wherein intermediate portions of the inner surface of each pocket with respect to the radial direction are defined as circumferential non-contact surface areas that the corresponding ball is prevented from contacting; and wherein substantially all edges of the ball bearing surfaces of the inner surface of each pocket, which may contact the ball, are defined as chamfered edges."

Ishiwada discloses a retainer for a rolling bearing in which adjacent and contiguous first and second pocket surfaces 40 and 42 (as well as 62 and 64, and 72 and 74) are very precisely

defined and formed inside a pair of pawls. All of the Figures in Ishiwada represent a no load condition. (See Ishiwada, e.g., at paragraph 30). And in all of the Figures, δ , referred to as an axial clearance, is defined as the difference between a radius of curvature of respective second pocket surfaces 42, 62, 72 and a radius of ball B. (See Ishiwada, e.g., at paragraph 32).

The Examiner asserts that the second pocket surface 42 of Ishiwada corresponds to the non-contact surface area 6 of the subject application. Applicants respectfully disagree.

Since the radius of curvature of the second pocket surface 42 is, by definition, greater than the radius of ball B, there is nothing to prevent the ball B from contacting the second pocket surface 42.

Further, the paragraph of Ishiwada asserted by the Examiner to disclose the feature of "...substantially all edges of the ball bearing surfaces of the inner surface of each pocket, which may contact the ball, are defined as chamfered edges" (presumably paragraph 72) describes JP 10-82424, which is described in the Subject Specification, and was acknowledged by the Examiner as having been considered along with other references in the IDS submitted November 13, 2003. The only disclosed embodiments in JP 10-82424 show beveling 17 formed at a small portion of the periphery edge part 14 of pocket 8, to prevent lubricant from being scraped from the ball. (See JP 10-82424, e.g., at FIGS. 1 and 2).

Admittedly, JP 10-82424 discloses beveling at least a portion of a peripheral lip region of each pocket, but JP 10-82424 neither discloses nor suggests beveling the top edges (as shown in FIG. 2) of the elastic pieces 12. Instead, JP 10-82424 suggests that the small beveling 17a (as shown in FIG. 2) is sufficient to achieve the vibration and noise reduction.

In contrast, as shown, e.g., in FIGS. 3 and 5 of the subject application, substantially all of the edges of the ball bearing surfaces 5 are beveled, including upper and lower axial edges (as defined by axial direction arrow B in FIG. 1) and inner and outer radial edges (as defined by radial direction arrow A in FIG. 1).

Accordingly, Applicants respectfully submit that Ishiwada neither discloses nor suggests the invention as claimed in independent claim 1 or claim 5.

Thus, Applicants respectfully submit that independent claim 1 patentably distinguishes over the cited art, and should be allowable for at least the above-mentioned reasons. Further, Applicants respectfully submit that claim 5, which depends from independent claim 1, should be allowable for at least the same reasons as claim 1, as well as for the additional features recited therein.

REJECTION UNDER 35 U.S.C. §103:

In the Office Action, at page 4, item 10, the Examiner rejected claims 2 and 3 under 35 U.S.C. §103(a) as being unpatentable over Ishiwada in view of Yamamoto, (US 2003/0012471 – hereinafter Yamamoto). The reasons for the rejection are set forth in the Office Action and therefore not repeated. Applicants traverse this rejection and respectfully request reconsideration.

In the Office Action, at page 5, item 12, the Examiner rejected claim 4 under 35 U.S.C. §103(a) as being unpatentable over Ishiwada in view of Hottinger (U.S. Patent No. 1,252,007 – hereinafter Hottinger). The reasons for the rejection are set forth in the Office Action and therefore not repeated. Applicants traverse this rejection and respectfully request reconsideration.

As a general matter, to establish a *prima facie* obviousness rejection, the Examiner needs to provide evidence of the existence of individual elements corresponding to the recited limitations, a motivation to combine the individual elements to create the recited invention, and a reasonable expectation of success. (See MPEP, at 2143. – “[t]he teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure.’ In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).”, and at 2143.03 – “[t]o establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.’ In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).”).

Should the Examiner fail to provide evidence that the individual elements exist in the prior art, or that the motivation exists in the prior art or in the knowledge generally available to one of ordinary skill in the art, then the Examiner has not provided sufficient evidence to maintain a *prima facie* obviousness rejection of the claim. (See MPEP, at 2143.03, and 2143.01). Thus, the burden is initially on the Examiner to provide evidence as to why one of ordinary skill in the art would have been motivated to combine the individual elements to create the recited invention, and to demonstrate that this evidence existed in the prior art or in the knowledge generally available to one of ordinary skill in the art. (MPEP 2143.01).

Regarding claim 4, the Examiner states that the motivation to combine Ishiwada and Hottinger would have been to “provide better confinement of the ball within the retainer.”

Initially, the device disclosed in Hottinger is directed to bearings of the double-row type, in which two rows or series of balls travel in respective raceways. (See Hottinger, at lines 25-

58). Nevertheless, Hottinger discloses a base ring 1 with curved notches 2 formed in one end to receive respective balls. Spaces 5 separate flanges 3, which have fingers 4 that are adapted to be bent down on the balls to confine them in place. The spaces 5 allow a bending tool, such as pincers E to be inserted around the flanges 3 and bend down the fingers 4. (See Hottinger, at FIGS. 1-3, and page 1, line 101 to page 2, line 23).

As noted above, in the section regarding the rejection under 35 U.S.C. §102, Ishiwada discloses a retainer for a rolling bearing in which adjacent and contiguous first and second pocket surfaces, whose respective radii of curvature are very carefully defined. The pawls 36 in Ishiwada are not bent down after ball loading, as are the fingers 4 of Hottinger. Applicants respectfully submit that such bending of pawls 36 after ball loading would alter the carefully defined radii of curvature of the first pocket surfaces. Thus Applicants respectfully submit that Ishiwada teaches away from such post-ball loading bending.

As such, Applicants respectfully submit that there is insufficient evidence of a motivation that existed in the prior art and which would have motivated one of ordinary skill in the art to make the combination in the manner set forth in the office action.

Accordingly, Applicants respectfully submit that the Examiner has failed to provide evidence that the motivation to combine the references as suggested by the Examiner exists in the prior art or in the knowledge generally available to one of ordinary skill in the art, and thus, the Examiner has not provided sufficient evidence to maintain a prima facie obviousness rejection of the claim.

Applicants respectfully submit that claims 2-4, which depend from independent claim 1, should be allowable for at least the same reasons as claim 1, as well as for the additional features recited therein.

NEW CLAIMS:

Applicant respectfully submits that for at least similar reasons as those stated in the section regarding the rejection under 35 U.S.C. §102, new claims 6 and 7 patentably distinguish over the cited art and should be allowable.

CONCLUSION:

In accordance with the foregoing, Applicants respectfully submit that all outstanding objections and rejections have been overcome and/or rendered moot, and further, that all pending claims patentably distinguish over the cited art. Thus, there being no further

outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited.

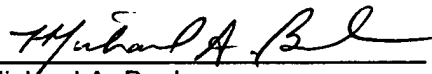
If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such issues.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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